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# *Palmorchis caxiuanensis*, a New Species of Orchidaceae from Eastern Amazonia, Brazil

Antônio Elielson Sousa da Rocha, Samuel Soares de Almeida, and Maria Aparecida Freitas  
Coordenação de Botânica, Museu Paraense Emílio Goeldi, Caixa Postal 399, 66040-170, Belém,  
Pará, Brasil. aelielson@bol.com.br; samuel@museu-goeldi.br;  
mafreitas@museu-goeldi.br

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**ABSTRACT.** A terrestrial orchid, *Palmorchis caxiuanensis*, is described from the Amazonian rain forest of Pará State, northern Brazil. Flowers and habit are illustrated. This species is clearly allied to *Palmorchis sobralioides*, *P. guianensis*, and *P. duckei*, but is distinguished by the length of the petiole, lip, and column.

**RESUMO.** Uma orquídea terrestre, *Palmorchis caxiuanensis*, é descrita para Amazônia, estado do Pará, Norte do Brasil. Flores e hábito são ilustrados. Esta espécie é próxima de *Palmorchis sobralioides*, *P. guianensis* e *P. Duckei*, diferindo basicamente pelo comprimento do pecíolo, labelo e coluna.

**Key words:** Brazil, Orchidaceae, *Palmorchis*.

According to Dressler (1993), *Palmorchis* Barbosa Rodrigues is a genus of about 12 Neotropical species belonging to the tribe Palmorchideae (Dressler) Dressler (Orchidaceae). Hoehne (1945) and Pabst and Dungs (1975) cite only five species known to occur in Brazil. The genus is characterized by having the lip partly united with the column along the midline (Dressler, 1993).

Recent botanical explorations of the Ferreira Penna Scientific Station in Caxiuanã National Forest, Municipality of Melgaço in the state of Pará, Brazil, have led to the discovery of a taxon distinct from previously described Brazilian species of *Palmorchis*.

***Palmorchis caxiuanensis*** Rocha, S. S. Almeida & Freitas, sp. nov. TYPE: Brazil, Pará: Melgaço, Caxiuanã Nat. Forest (FLONA de Caxiuanã), Ferreira Penna Sci. Station, 1°42'30"S, 51°31'45"W, 22 Jan. 2004, M. A. Freitas F1027 (holotype, MG). Figure 1.

Herba terrestris erecta 30–60 cm alta, 4 ad 7-foliatis, folio erecto, lamina elliptica lanceolata, 5-nervata, 28–35 cm longa, supra medium 4.5–6.5 cm lata, petiolo 5–8 cm, racemo terminali; bracteis amplexicaulibus; sepalis oblongo-spathulatis, subaequilongis, apicularis; lateralibus paulo falcatis; petalis sepalis lateralibus similibus; labelo inferne basi columnae adnato, triangularis, 12 mm longo, inter apices loborum lateralium 8 mm lato, medio lamellis 2

longis parallelis ornato 2 mm, lobis lateralibus truncate, intermedio oblongo triangularis; columna 10 mm longa, semi-cilindrica, apice livissime incurvata.

Terrestrial herb, 30–60 cm tall, caespitose. Leaves 4 to 7, erect, alternate, distichous to gradually spiral; leaf sheaths ca. 5 cm long; petiole 5–8 cm long; blades 5-veined, 28–35 × 4.5–6.5 cm, elliptic-lanceolate to oblanceolate, base attenuate, apex acuminate, glabrous. Inflorescences 1 or 2 terminal racemes, 5–6 cm long, with 1 or 2 inflorescence bracts; bracts foliaceous, lanceolate, 3–12 × 1–3.5 cm, glabrous, apices acuminate. Floral bracts deltoid, acuminate, distichous, bases amplexicaul, 8–9 × 4–6 mm, glabrous; pedicel and ovary 1.0–1.5 cm long; sepals greenish white, apiculate, subequal; dorsal sepal 15–17 × 3.5–4.0 mm, apex acute, oblong-spathulate, slightly carinate, mid-nerve prominent; lateral sepals subfalcate, 14–15 × ca. 4 mm; petals similar to lateral sepals; lip white, triangular, ca. 12 mm long, 8 mm between lateral lobes, extending from the middle of the lateral lobes; disc with a pair of short distant keels, parallel, 2 mm length; base pubescent, adnate to the column, mid-lobe prominent, ca. 2.5 mm long, apex acute; lateral lobes truncate; apical lobe oblong-triangular; column semi-cylindrical, semi-erect, gently arcuate at apex, pilose in lowest third part and on ventral surface, ca. 10 mm long; anthers rounded, 1.5 × 1.5 mm; pollinia 4, ca. 0.5 mm long.

**Ecology.** *Palmorchis caxiuanensis* occurs on the plateaus separating the small rivers that drain this area of Amazonian lowland rain forest. Plants occur in clusters of about 5–10 m in diameter, with up to 10 plants per cluster. Two to five clusters were found in the one hectare sampled in the Caxiuanã area.

The species has been recently discovered, so its status of conservation is still being evaluated (sensu IUCN). However, it seems that its distribution is known only in the lower part of the basin of the Anapu River (Amazonia).

**Phenology.** Flowering and fruiting occurs between December and May, during the rainy season.



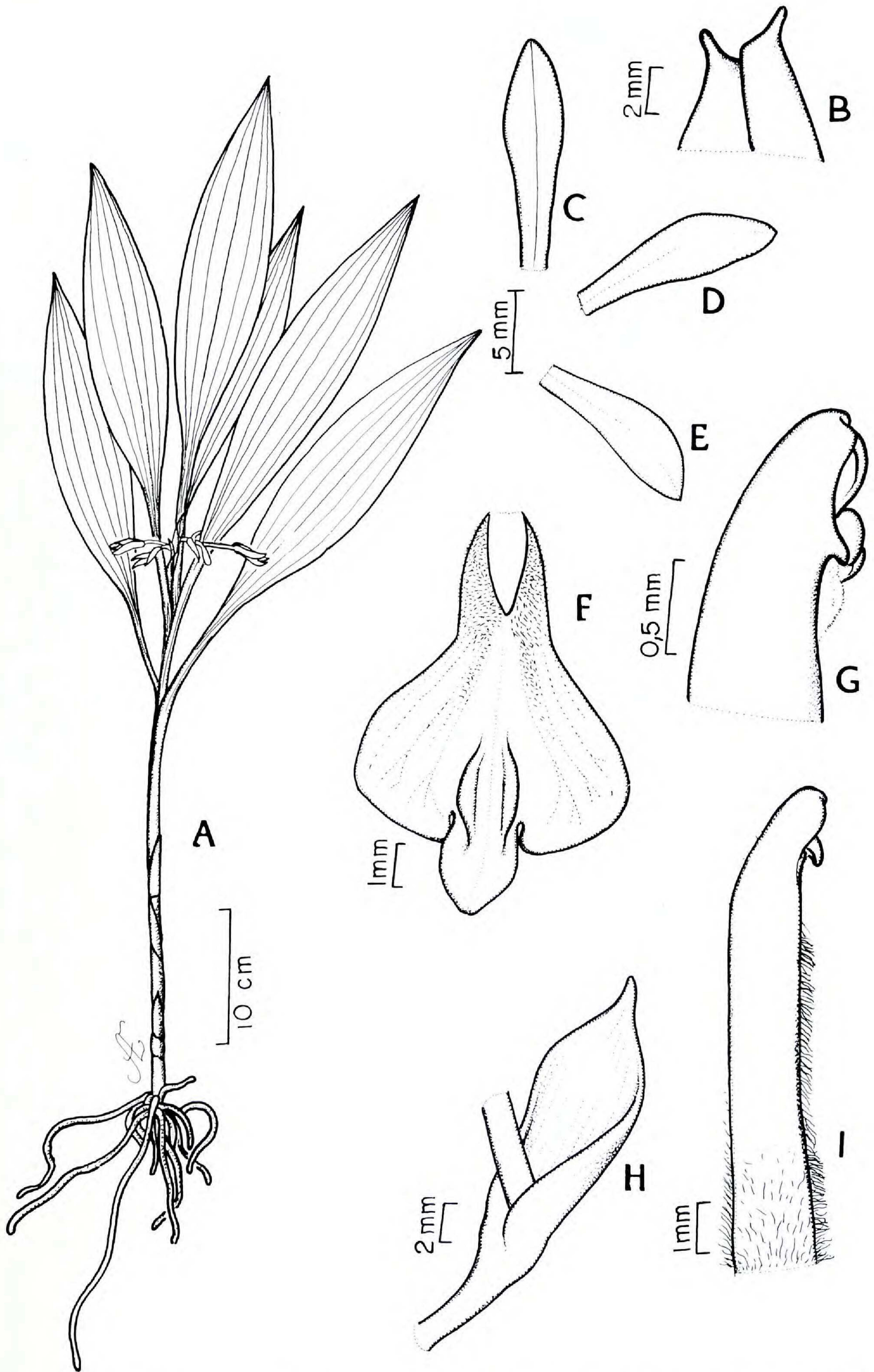


Figure 1. Habit and floral structures of *Palmorchis caxiuanensis*. —A. Habit. —B. Petal apex. —C, E. Sepals. —D. Petal. —F. Lip. —G. Column detail. —H. Floral bract. —I. Lateral view of column (M. A. Freitas F1027, MG).



Table 1. Morphological characters used to separate *Palmorchis caxiuanensis* from *P. duckei*, *P. guianensis*, and *P. sobralioides*.

<i>P. caxiuanensis</i>	<i>P. duckei</i>	<i>P. guianensis</i>	<i>P. sobralioides</i>
Leaves 5-veined	Leaves 7-veined	Leaves 5-veined	Leaves 5-veined
Petiole 5–8 cm long	Petiole 2–5 cm long	Petiole 7–13 cm long	Leaves sessile
Petals and sepals greenish white	Petals and sepals lilac	Petals and sepals greenish white	Petals and sepals greenish white
Column 10 mm long, pilose	Column 18 mm long, glabrous	Column 10 mm long, glabrous	Column 14 mm long, pilose
Lip 12 × 8 mm, margin ciliate, lateral lobes truncate	Lip 17 × 12 mm, margin glabrous, lateral lobes rounded	Lip 8 × 4–5 mm, margin ciliate, lateral lobes rounded	Lip 11 × 8 mm, margin glabrous, lateral lobes rounded

*Paratypes.* BRAZIL. **Pará:** Melgaço, Caxiuanã Nat. For. (FLONA de Caxiuanã), Ferreira Penna Scientific Station, 22 Jan. 2004, *M. A. Freitas F1028* (MO); 7 Feb. 2004, *M. A. Freitas F1029* (IAN).

*Palmorchis caxiuanensis* is morphologically most similar to its congeners *P. sobralioides* Barbosa Rodrigues, *P. guianensis* (Schlechter) C. Schweinfurth & Correll, and *P. duckei* Hoehne. However, the morphological characters cited in Table 1 readily separate them.

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